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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,340	07/14/2003	James Patrick Clinch	140/40364	6793

279 7590 05/14/2004

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EXAMINER	
MITCHELL, KATHERINE W	

ART UNIT	PAPER NUMBER
3677	

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/619,340	CLINCH ET AL.
	Examiner	Art Unit
	Katherine W Mitchell	3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-24 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 14 July 2003 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/17/2003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: It is for another application, entitled "Collapsible Nut" and not for this application.

Specification

2. The abstract of the disclosure is objected to because of the implied phrase "is provided" in line 1. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The disclosure is objected to because of the following informalities: The "Brief Description of the Drawings" is inaccurate. Fig 6, (first embodiment) cannot be described as a view of Fig 9 (second embodiment). Applicant has disclosed that Figs 1-

6 are to the first embodiment, and Figs 7-12 are to the second embodiment. However, Fig 6 is described as a view taken along lines 12-12 of Fig 9, which is not possible.

Appropriate correction is required.

Drawings

4. The drawings are objected to because several figures have multiple lines *appearing* to point to the same thing. For example, Fig 2 has "104" and "130" pointing to the same thing, and also has "102" and "106" pointing to the same thing. "102" / "202 " and "104" / "204" should have arrow tips on the end of the lead lines to indicate they are referring to the whole nut and cage, respectively.

5. Fig 3 is objected to because it shows cut line "6-6" but this cut line is never used or explained.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 3, 16, 23, 9,11,14, and 19 are objected to because of the following informalities:

Claim 9 recites "to a tangential point thereof." There is no indication of what tangential is relative to. Page 11 lines 9-11 of the Specification does not further clarify "to a tangential point thereof." Examiner will assume applicant means the protrusion's sides meet at a single point.

tan·gen·tial (tàn-jèn¹shel) also **tan·gen·tal** (-jèn¹tl) *adjective*
1. Of, relating to, or moving along or in the direction of a tangent.

2. Merely touching or slightly connected.[1]

7. Claim 11 is objected to because it is not clear whether applicant is claiming the combination (nut member and cage member) or the subcombination (nut member). The independent claims is clearly for the subcombination, and later independent claims are for the combination, thus examiner is assuming applicant intends to claim the subcombination (nut member) only and is examining accordingly.

8. In claims 14 and 19, "means for encaging" is not consistently used; "encaging means" is sometimes used instead. For consistency, applicant should use "means for encaging" throughout. However, examiner is considering that applicant has invoked 35 U.S.C. 112, sixth paragraph by use of the "means for" clause.

9. Claims 3, 16, and 23 are objected to because it is not clear whether the protrusion or the corner is where the at least one sidewall meets the lower surface.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1- 5, 7- 9, and 11-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Peterson U. S. PATENT 5096350.

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[1] *The American Heritage® Dictionary of the English Language, Third Edition* copyright © 1992 by Houghton Mifflin Company. Electronic version licensed from INSO Corporation; further reproduction

Regarding all claims: Examiner notes that column 3 lines 41-43 teach that the at least one projection/protrusion may extend from the lower surface 25 of the base 22 of the female fastener (nut) instead of being a separate element as shown in the drawings.

Re Claim 1: Peterson teaches a nut member (20 in Figs 1 and 4) configured to be engaged within a cage member 30 and configured to receive a fastener (column 4 lines 1-4), said nut member comprising:

- A base portion having an upper surface, a lower surface, and sidewalls which connect said upper surface to said lower surface (Fig 1), said base portion further having
    - At least one protrusion (54, 154, column 3 lines 29-48) extending outwardly from said lower surface thereof, said base portion having an aperture 26 which extends therethrough to receive the fastener.

Re Claim 2: A nut with a base having four protrusions extending from lower surface is best seen in Fig 1.

Re Claim 3: A nut with at least one protrusion provided at a corner of said lower surface where at least one sidewall meets at said lower surface is seen in Fig 1.

Re Claim 4: A nut member wherein said base portion has four sidewalls to define four corners of said lower surface is best shown in Fig 1. Four protrusions extending from the lower surface such that each protrusion extends from said lower

surface, such that each protrusion extends from one of said four corners of said lower surface, are shown in the same figure.

Re Claim 5: Peterson shows the protrusions extending to a point in Fig 1 and 4.

Re Claim 7: At least one protrusion extends at least a portion of a distance between said aperture and a corner, as best seen in Figs 1 and 4.

Re Claim 8: A nut member wherein said base portion has four sidewalls to define four corners of said lower surface is best shown in Fig 1 and 4. Four protrusions extending from the lower surface such that each protrusion extends from said lower surface are shown in the same figures. Each protrusion extends at least a portion of a distance between said aperture and a corner, as evidenced by the dashed lines in Figs 1 and 4 passing through the uppermost and lowermost corners of the diagonally-oriented plate with protrusions, which also shows the protrusions extending between the aperture and the corner.

Re Claim 9: A least one protrusion extends to a tangential point thereof, as best understood by examiner, as best seen in Fig 4.

Re Claim 11: At least one protrusion is configured to allow for a reduced amount of bearing surface interface between said nut member and {a } cage member as taught in column 3 lines 35-41.

Re Claims 12-13: A cylindrical portion 24 extending from said upper surface of said base and having the aperture extending from the base portion into said cylindrical portion is shown in Figs 1 and 4.

Re Claim 14: Peterson teaches an assembly configured to receive a fastener 13 said assembly comprising:

- A nut member (20 in Fig 1 or 4) having a base portion having
  - an upper surface, a lower surface, and sidewalls which connect said upper surface to said lower surface (Figs 1 and 4), said base portion further having
  - at least one protrusion (54,154, column 3 lines 29-48) extending outwardly from said lower surface thereof, said base portion having an aperture 26 which extends therethrough to receive the fastener and
- means for encaging (cage 30 in Fig 1 or 4) said nut member, said encaging means
  - configured to provide limited range of movement of said nut member in at least one direction (inherent in cage/nut arrangements and described in column 3 lines 3-28),
  - said encaging means configured to allow access to said aperture of said nut member within the limited range of movement of said nut member (Figs 1 and 4),
  - said at least one protrusion of said nut member in contact with said encaging means (Fig 1 and 4, when assembled, and Fig 3 showing assembled).

Re Claim 15: A nut with a base having four protrusions extending from lower surface is in Fig 1 and 4.

Re Claim 16: A nut with at least one protrusion provided at a corner of said lower surface where at least one sidewall meet at said lower surface is shown in Figs 1 and 4.

Re Claim 17: At least one protrusion extends at least a portion of a distance between said aperture and a corner, as evidenced by the dashed lines in Figs 1 and 4 passing through the uppermost and lowermost corners of the diagonally-oriented plate with protrusions, which also shows the protrusions extending between the aperture and the corner.

Re Claims 18-19: At least one protrusion is configured to allow for a reduced amount of bearing surface interface between said nut member and {a } cage member as taught in column 3 lines 35-41. The encaging means 30, when welded and coated, would inherently have the nut member prevented from being stuck to the encaging means by the protuberance/projection 54,154 as described in column 4 lines 58-61.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson U. S. PATENT 5096350.

Re claims 6 and 10: Column 3 lines 37-36-41 teach that the protrusions/projections can be "ridges, rings, detents, or other separating projections which reduce planar contact between these surfaces". Both tetrahedrons and rounded beads would inevitably which reduce planar contact between two surfaces, and absent some showing of criticality, the claimed shapes are nothing more than several of

numerous shapes a person of ordinary skill in the art would find obvious for the purpose of providing separating projections. In re Dailey 149 U S PQ 47 (CCPA 1976).

14. Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson U. S. PATENT 5096350 in view of Cosenza U. S. PATENT 5137406.

Re Claim 20: Peterson teaches a combination nut member, cage member, and fastener configured for interaction with a workpiece having first and second surfaces and an aperture provide therethrough, said combination comprising:

- A nut member (20 in Fig 1 or 4) having a base portion having
  - an upper surface, a lower surface, and sidewalls which connect said upper surface to said lower surface (Figs 1 and 4), said base portion further having
  - at least one protrusion (54.154 in Fig 1 and 4) extending outwardly from said lower surface thereof, said base portion having an aperture 26 which extends therethrough, said aperture defining a threaded wall, (column 2 lines 67-68) and
- a cage member (cage 30 in Fig 1 or 4) which is associated with said first surface of said workpiece (subassembly, door pillar, column 1 lines 15-40),
  - said cage member having an opening therethrough (Figs 1 and 4),
  - said nut member being encaged within said cage member (Fig 1 and 4 when assembled, Fig 3 showing assembled)
  - said at least one protrusion of said nut member being embedded into said cage member (Fig 1 and 4 when assembled, Fig 3 showing assembled).

However, Peterson does not explicitly teach the male fastener, although a male fastener is implied by the teaching of a threaded female fastener. Cosenza teaches

- a fastener (13 in Fig 1) having an enlarged head portion and an elongated threaded shank extending therefrom,
    - said enlarged head being associated with said second surface of said workpiece,
    - said elongated shank extending through said aperture of said workpiece and being in threaded engagement with said threaded wall of said nut member (Fig 1 assembled). Examiner notes that Cosenza shows inner panel 15 adjacent outer panel 17, but "associated with" does not require direct attachment, nor does an additional panel affect the combination's function or structure.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Peterson and Cosenza before him at the time the invention was made, to modify Peterson as taught by Cosenza to include a fastener with an enlarged head passing thru the workpiece and in threaded engagement with said nut member in order to obtain a complete fastening system that can be used to connect parts together, as fasteners are by definition used to do. One would have been motivated to make such a combination because a female fastener implies mating with a male fastener, as no fastening is possible without mating engagement of the two parts.

Re Claim 21: A combination wherein the cage member is configured to be welded to said first surface of said workpiece is taught in column 1 lines 36-40 of Peterson.

Re Claim 22: A combination wherein said lower surface of said base portion of said nut member is substantially positioned against said cage member is shown in Fig 3 of Peterson.

Re Claim 23: A combination wherein said at least one protrusion is provided at a corner of said lower surface where at least one sidewall meets at said lower surface is shown in Figs 1 and 4.

Re Claim 24: A combination wherein said at least one protrusion extends at least a portion of a distance between said aperture and a corner, as evidenced by the dashed lines in Figs 1 and 4 passing through the uppermost and lowermost corners of the diagonally-oriented plate with protrusions, which also shows the protrusions extending between the aperture and the corner.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W Mitchell whose telephone number is 703-305-6713. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kwm
5/10/2004